This is the published version of a paper published in *Digital Journalism*.

Citation for the original published paper (version of record):

*Data Journalism Beyond Legacy Media: The case of African and European Civic Technology Organizations*  
*Digital Journalism,* : 1-15  
https://doi.org/10.1080/21670811.2019.1591166

Access to the published version may require subscription.

N.B. When citing this work, cite the original published paper.

Permanent link to this version:  
http://urn.kb.se/resolve?urn=urn:nbn:se:kau:diva-71709
Data Journalism Beyond Legacy Media: The case of African and European Civic Technology Organizations

David Cheruiyot, Stefan Baack & Raul Ferrer-Conill

To cite this article: David Cheruiyot, Stefan Baack & Raul Ferrer-Conill (2019): Data Journalism Beyond Legacy Media: The case of African and European Civic Technology Organizations, Digital Journalism, DOI: 10.1080/21670811.2019.1591166

To link to this article: https://doi.org/10.1080/21670811.2019.1591166

© 2019 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

Published online: 02 Apr 2019.

Submit your article to this journal

View Crossmark data
Data Journalism Beyond Legacy Media: The case of African and European Civic Technology Organizations

David Cheruiyot\textsuperscript{a}, Stefan Baack\textsuperscript{b}\textsuperscript{*} and Raul Ferrer-Conill\textsuperscript{c}

\textsuperscript{a}Department of Geography, Media and Communication, Karlstad University, Karlstad; \textsuperscript{b}Alexander von Humboldt Institute for Internet and Society; \textsuperscript{c}Department of Geography, Media and Communication, Karlstad University, Karlstad, Sweden

ABSTRACT
Research has paid relatively little attention to two aspects that are increasingly important in understanding data journalism as a maturing field: (a) journalism today is increasingly provided by a diverse set of actors both inside and outside of legacy media organizations, and (b) data journalism has become a global phenomenon that cannot be fully grasped within national contexts only. Our article brings both of these aspects together and investigates the roles and practices of peripheral actors in European and African contexts. We engage with research on the role of non-profits and civic technologists in journalism to interrogate further the entanglements between civic technology organizations and data journalism. Following in-depth interviews with 29 practitioners of data-driven non-profits in Europe and Africa, we conclude that practices and roles of these non-profits in relation to journalism are similar, but transcultural and contextual influences shape how they complement or expand data journalism.

KEYWORDS
Civic technology organizations; data journalism; journalism practice; legacy news media; non-profits

Introduction
Data journalism has become a global phenomenon, yet it is adopted in highly stratified and uneven ways in different regional and organizational contexts (Fink and Anderson 2015). The variety in how data journalism is practiced is not only due to uneven resources but also because data journalism is not a purely “journalistic” phenomenon. Shaped by its embeddedness in communities that span across various professional domains, data journalism has emerged at the intersection between professional journalism and open source culture (Coddington 2015) and has co-evolved with other forms of data work and data culture, in particular, open data and civic tech initiatives (Parasie and Dagiral 2013; Baack 2018b).

As a result, peripheral actors in journalism or “interlopers,” who operate at the intersection between news media and civil society (Holton and Belair-Gagnon 2018, cf.

CONTACT David Cheruiyot david.cheruiyot@kau.se
\*
Stefan Baack is now working for the Mozilla Foundation.
Eldridge 2014), play prominent roles in the ways in which data journalism is understood and practiced today. Such peripheral actors may not work in news media organizations, but in various ways complement or expand the work of journalists thereby creating “warps” and “woofs” in the “woven fabric” of journalism (Ryfe 2019). The actors engage in (data) practices similar to those of journalists and have ambitions that strongly overlap with traditional notions of journalism (Baack 2018b). With “traditional journalism,” we refer to notions of watchdog journalism and information providers, which have originated in the West but also resonate in the African countries we studied. They are data and journalism enthusiasts operating beyond legacy news organizations.

Most research on data journalism focuses on how it is practiced within the boundaries of news media in single national contexts, such as Sweden (Appelgren and Nygren 2014), the US (Fink and Anderson 2015), Norway (Karlsen and Stavelin 2014), or Germany (Weinacht and Spiller 2014). However, we argue (a) that actors at the periphery of journalism have a strong impact on data journalism; and (b) that while the way in which they affect the practices of data journalists is contingent on the contextual environment (e.g., the national media system, the role-models of journalists, the strength and diversity of national news media), data journalism is a transnational phenomenon that cannot be studied within national frameworks alone. However, there is almost no work that is dedicated to the study of how peripheral actors to data journalism understand their role, and how they relate to professional journalism in a transnational perspective.

This article aims to fill this gap by examining and comparing the practices, activities, and goals of peripheral actors to data journalism in European and African contexts through the study of organizations that operate in two Western European and 11 African countries. To do so, we draw and expand Baack’s (2018b) work about the figurations and entanglements formed by data journalists and civic technologists. Our focus is not on data journalists working within traditional news media, but on the role of peripheral actors and their perceived influence on data journalism. We refer to data journalists and data activists who work for civic tech and non-profit organizations, and not for traditional legacy news media. More specifically, we ask the following research question: How do peripheral actors in European and African countries understand their roles and practices in relation to data journalism?

This article contributes to a new wave of data journalism scholarship in two ways. First, by expanding the geographic scope of research, offering a comparative perspective between Europe and Africa. Second, by illuminating the practices and discourses of data journalism beyond legacy news media. Understanding how non-profits and civic organizations make sense of data journalism, we can form a more complete picture of data journalism as a maturing field.

First, to discuss data journalism practices in European and African countries, we present an overview of existing scholarship on the role of civic tech non-profits as peripheral actors in data journalism and reflect on “contextualism” as a basis for comparing both geographical contexts. Second, we will discuss methodology and outline our mainly qualitative approach. Third, we present our findings of similar practices and ambitions of peripheral actors confronted with very different contextual issues. We conclude with a discussion on the entanglements between these
non-profits and data journalism, and the role they play in informing and shaping data journalism.

**Literature Review**

Scholarly work on data journalism has predominantly focused on cases from American and European contexts (Lewis and Westlund 2015). By contrast, very little attention has been paid to African data journalism even though Cheruiyot and Ferrer-Conill (2018) find ample evidence of data journalism being practiced in several African countries.

Most research in European countries has found that beyond elite legacy news organizations, newsrooms are introducing data journalism at slow rates, mostly due to the specific skills that are required (De Maeyer et al. 2015). In Sweden, Appelgren and Nygren (2014) found that data journalism was still in its infancy, and its adoption and interest by journalists is met both with curiosity and skepticism. In Norway, Karlsen and Stavelin (2014) found an aversion to the complexity often associated to data journalism, which made a limited and often rudimentary adoption of data journalism. Uskali and Kuutti (2015) found that in the UK and Finland, complex data journalism projects are subcontracted (what they call the “entrepreneur model”) to external actors with the necessary expertise to do the job. In Belgium, De Maeyer et al. (2015) showed limited introduction, only spearheaded by a handful of champions who had the skill to adopt data journalism. In the Netherlands, Smit, de Haan, and Buijs (2014) also see a slow adoption due to the need for “transformer skills” that often require programmers, designers, and illustrators. This diversity of actors is not available to small news organizations. Finally, Borges-Rey (2016) found that in the UK, data journalism has been internalized in the news cycle of mainstream news media, but that it requires distinct skills and practices that regular reporters usually lack.

The studies described above predominantly focus on news media organizations, but they illustrate that data journalism is a practice that borrows skills and competencies found beyond the traditional toolkits of journalists. Interlopers, external, or peripheral actors shaping journalism from the fringes or even outside journalistic boundaries has stirred interest in journalism studies today (see Belair-Gagnon and Holton 2018; Carlson and Lewis 2015; Eldridge 2017). Most of this work, however, is not primarily concerned with how these peripheral actors understand their own role in relation to journalism. Baack (2018b) showed that in European countries, the “entanglements” between data journalism and civil society even affect journalists that do not directly engage with civic technologists and calls for stronger scrutiny on the actors within civic tech organizations. Cheruiyot and Ferrer-Conill (2018) found that in mostly Sub-Saharan Africa, non-profit organizations are the leading voices of data journalism, often negotiating their roles between activism, advocacy, and journalism. The findings show these organizations draw from journalistic discourses of traditional news media, but civic goals and missions as non-profits drive their approaches, thereby shaping the practice of data journalism.
Considering the growing influence of external actors in data journalism, and the imbalance in the research literature on data journalism with its focus on traditional news media, we aim to address this research gap by interrogating how civic tech and non-profit organizations as peripheral actors perceive their relationship and influence in European and African contexts.

Civic Tech Organizations at the Periphery of Journalism

A key marker of non-profits’ operations in journalism is their tendency to establish regional and global networks and their partnerships with NGOs, humanitarian organizations, and international foundations through which they gain funding, visibility, and influence (cf. Wright 2018; Cottle and Nolan 2007; Fenton 2010; Powers 2018; Rosenstiel et al. 2016; Waisbord 2011; Tietaah et al. 2018). Civic technologists form what Reese (2015) describes as a transnational advocacy network that adapts “a global project to diverse local contexts” (2263). This means that transnational advocacy networks champion “problem-solving” approaches that promote “global norms and conversation” (Reese 2015, 2263) about issues such as human rights, civil liberties, digital or data literacy, constructive journalism, or open source. Baack (2018b) and Cheruiyot and Ferrer-Conill (2018) found that data-driven non-profit civic tech organizations are embedded in a transnational advocacy network bound together by overlapping actor-constellations, transnational networking organizations (like “Code for All”), and continuous exchange. This involves shared data practices, definitions, and identities in the sector (cf. Donohue 2016); an overlap in personnel across countries through fellowships, trainings and regular international conferences; and a high degree of communicative connectivity between organizations (Hepp 2015) through continuous online discourse, regular participation in international events, and cross-national collaborations.

The “global project” (Reese 2015) of non-profit civic tech organizations is to enable forms of participatory culture in as many different contexts as possible by developing “eco-systems” of data infrastructures and tools; intended to help citizens to be more informed, active, and engaged (Baack 2018a). Participatory culture is based on the idea that more participation leads to better outcomes and thus aims to create a more “engaged, representative, and collectively intelligent society” (Lewis 2012, 848). Civic tech’s roots in participatory culture are most explicit in the frequent use of the term “empowerment” among civic tech organizations across countries. Civic technologists understand empowerment in terms of accessibility and convenience: by providing services that make engagement with, and monitoring of governments easier and less time-consuming, they aim to increase the level of participation, which in turn would make decision-making processes by governments more representative. Data play an essential role in implementing this vision of participatory culture, as the availability of data that is granular and complete is a prerequisite for many civic tech applications that provide more convenient access to information.

In this study, we rely on the figurational model developed by Baack (2018b) which shows how data journalists and civic technologists form a community of practice through overlapping skills and complementary ambitions. Both civic technologists and data journalists rely on data and use similar tools and services for their work, and
both aspire to empower citizens. This enables them to complement each other: civic technologist can develop tools for journalists or provide technical skills and expertise to them, while investigations by journalists can spark ideas for new civic tech applications. Their practices interlock in the sense that they interdependently respond to each other and expand one another (cf. Couldry and Hepp 2017). Theoretically, we can therefore describe them as existing along a shared continuum of practices, a shared repertory of “images, stories, and actions” (Mansell 2012, 33).

More specifically, the practices of civic technologists and data journalists interlock along practices of facilitating and gatekeeping (Baack 2018b). Facilitating means enabling others to take action themselves, while gatekeeping is about producing and/or highlighting information that is deemed publicly relevant. Gatekeeping is at the heart of professional journalism while facilitating is the core of civic tech projects. Civic tech organizations aim to increase the agency of citizens towards governments by making the monitoring of, and engagement with governments easier and less time-consuming (Baack 2018a). Simply put, the more actors emphasize facilitating over gatekeeping, the more peripheral to professional journalism they perceive themselves.

This figurational model was developed based on data collected in Western Europe. However, given the nature of civic tech as a transnational advocacy network that shows many similarities in practices and values across regions, we adopt the model to investigate how contextual differences influence the way peripheral actors relate to and seek to affect professional journalism. While we do not wish to oversimplify the cultural complexities of the media landscapes in Western Europe and Africa (both have diverse media systems (see Hallin and Mancini 2004, 2012; Kivikuru 2009)), in this study, we are grouping the countries we studied by regions because they share important features in relation to contextual conditions in which journalism and non-profits operate. In both regions, the countries share ideals that are marked by aspirations towards a functioning democracy, press freedom, and public service media (Örnebring 2016) and appreciation of similar professional journalism ideals (Hanitzsch 2007). Furthermore, non-profit civic tech organizations in both regions borrow values from journalistic discourse and attempt to shape news practice by expanding methods and procedures of data journalism (Cheruiyot and Ferrer-Conill 2018).

Method

First, drawing from Powers and Vera-Zambrano (2018), we adopt the notion of “contextualism”, which aims “to understand the meaning of an idea or practice in its context and uses comparison to examine the mechanisms or principles that unify or differentiate cases” (2). In this study, contextualism implies interrogating the features and elements that underpin the practice of data journalism by non-profit civic techs in the two contexts of Western Europe and Africa. Ultimately, a contextual approach enables us to acknowledge the similarities of civic tech organizations across contexts while avoiding a universalism that employs standardized concepts and meanings (Hanitzsch 2009; Powers and Vera-Zambrano 2018). Our goal is to explore how a similar global project manifests itself in distinct ways in the different countries we studied.
Second, the qualitative approach presented in this article analyzes and compares the practices and self-understandings of peripheral actors in journalism in the European and African contexts. We used in-depth interviews with 29 key respondents from non-profit organizations in Europe and Africa. The organizations studied were transnational and operated in multiple countries: Germany, Kenya, Nigeria, UK, and South Africa. The organizations were: Africa Check, Code for Africa, Correctiv, mySociety, Open Up, and the Open Knowledge Foundation Germany. Table 1 shows the main characteristics of these organizations which were selected (a) because of the prominence of their work in their regions, (b) the linkages with international networks and data-driven organizations such as Code for America, Hacks/Hackers, and the International Fact-checking Network, (c) their visibility in global conferences, and (d) partnerships with smaller and related organizations. Their prominence varies in scale and outreach, but all these organizations developed close relationships with journalists. For example, the Open Knowledge Foundation Germany is a key actor for the German civic tech scene,
it advocates for open data and has developed most of the bigger civic tech applications, some of which are primarily being used by journalists. The leading non-profit involved in data journalism in Africa is Code for Africa, with projects and partnerships in nine African countries – Tanzania, Kenya, Nigeria, South Africa, Morocco, Sierra Leone, Ghana, Cameroon, and Uganda.

The respondents took varying roles in the organizations that include editors, directors, country leads, data journalists, data researchers, trainers, program managers, and digital editors, as shown in Table 2. The interviews sought to understand the perception of the respondents on the following: the activities and goals of the organizations; their data and journalistic practices, how they perceive their goals and mission as non-profits; and how they perceive their practices in relation to legacy news media. More concretely, we aimed to understand the organization’s goals and activities as well as the individual data practices in relation to their facilitating or gatekeeping function (Baack 2018b). On average, the interviews were 30 minutes in length. All respondents have been anonymized, and in presenting our findings, we have identified them by providing them an organizational code and a number.

Findings and Analysis

To address our research question – How do peripheral actors in European and African countries understand their roles and practices in relation to data journalism? – we interrogated the data for an understanding of how the non-profits define themselves as

<table>
<thead>
<tr>
<th>ID codes</th>
<th>Roles</th>
<th>Date</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>OD1</td>
<td>Project manager</td>
<td>September 2012</td>
<td>Germany</td>
</tr>
<tr>
<td>OD2</td>
<td>Top manager</td>
<td>September 2012</td>
<td>Germany</td>
</tr>
<tr>
<td>OD3</td>
<td>Top manager</td>
<td>November 2012</td>
<td>Germany</td>
</tr>
<tr>
<td>OD4</td>
<td>Project manager</td>
<td>November 2012</td>
<td>Germany</td>
</tr>
<tr>
<td>OD5</td>
<td>Project manager</td>
<td>November 2012</td>
<td>Germany</td>
</tr>
<tr>
<td>OD6</td>
<td>Senior developer</td>
<td>December 2012</td>
<td>Germany</td>
</tr>
<tr>
<td>OD7</td>
<td>Senior developer</td>
<td>January 2013</td>
<td>Germany</td>
</tr>
<tr>
<td>OD8</td>
<td>Project manager</td>
<td>January 2013</td>
<td>Germany</td>
</tr>
<tr>
<td>mS2</td>
<td>Top manager</td>
<td>May 2015</td>
<td>UK</td>
</tr>
<tr>
<td>mS3</td>
<td>Senior developer</td>
<td>May 2015</td>
<td>UK</td>
</tr>
<tr>
<td>mS4</td>
<td>Senior developer</td>
<td>June 2015</td>
<td>UK</td>
</tr>
<tr>
<td>mS5</td>
<td>Data researcher</td>
<td>August 2015</td>
<td>UK</td>
</tr>
<tr>
<td>mS6</td>
<td>International Team</td>
<td>August 2015</td>
<td>UK</td>
</tr>
<tr>
<td>Co2</td>
<td>Data journalist</td>
<td>March 2016</td>
<td>Germany</td>
</tr>
<tr>
<td>Co1</td>
<td>Data journalist</td>
<td>April 2016</td>
<td>Germany</td>
</tr>
<tr>
<td>AC1</td>
<td>Editor</td>
<td>March 2017</td>
<td>Kenya</td>
</tr>
<tr>
<td>OU1</td>
<td>Top manager</td>
<td>March 2017</td>
<td>South Africa</td>
</tr>
<tr>
<td>OU2</td>
<td>Data journalist</td>
<td>March 2017</td>
<td>South Africa</td>
</tr>
<tr>
<td>AC2</td>
<td>Editor</td>
<td>April 2017</td>
<td>South Africa</td>
</tr>
<tr>
<td>AC3</td>
<td>Top manager</td>
<td>April 2017</td>
<td>South Africa</td>
</tr>
<tr>
<td>CA2</td>
<td>Top manager</td>
<td>May 2017</td>
<td>South Africa</td>
</tr>
<tr>
<td>CA1</td>
<td>Top manager</td>
<td>June 2017</td>
<td>Nigeria</td>
</tr>
<tr>
<td>OU3</td>
<td>Data journalist</td>
<td>June 2017</td>
<td>South Africa</td>
</tr>
<tr>
<td>OU4</td>
<td>Data researcher</td>
<td>June 2017</td>
<td>South Africa</td>
</tr>
<tr>
<td>CA3</td>
<td>Top manager</td>
<td>July 2017</td>
<td>Kenya</td>
</tr>
<tr>
<td>CA4</td>
<td>Data journalist</td>
<td>July 2017</td>
<td>Nigeria</td>
</tr>
<tr>
<td>CA5</td>
<td>Trainer</td>
<td>July 2017</td>
<td>Kenya</td>
</tr>
<tr>
<td>AC4</td>
<td>Editor</td>
<td>July 2017</td>
<td>South Africa</td>
</tr>
<tr>
<td>OU5</td>
<td>Data evangelist</td>
<td>July 2017</td>
<td>South Africa</td>
</tr>
</tbody>
</table>
distinct from legacy news organizations and subsequently drew its implications to the nature of the role of peripheral actors in data journalism. Furthermore, our analysis centered on the understanding of how the non-profits reinforce or contradict the traditional journalistic practices through their performance of data journalism. The results were the following two broad themes discussed in the next section: Complementarity and the peripheral vision of journalism and, negotiating between civic and journalistic values.

Complementarity and the Peripheral Vision of Journalism

Our findings show that civic technologists seek to complement journalism’s role as a gatekeeper by facilitating others, i.e., they want to enable both members of the public and journalists to act more effectively. However, the extent at which they solely focus on the facilitating role varies.

In the UK and Germany, where data journalism is relatively well-established (at least at the level of national news media), civic tech organizations tend to see themselves as partners and facilitators of professional journalists, but they reject the idea that they do data journalism themselves, as a respondent said: “[our organization] doesn’t really have very much in common with the interactive team of the New York Times or the Guardian” (mS2). “Finding stories”, as a data researcher put it, is not something they have any interest in doing: “we don’t have that kind of editorial activist wing, we don’t have a message to push, so we’re not looking for one” (mS1). While they provide training for other NGOs and journalists to teach data skills, they picture a clear distinction: they are the “tool supplier” (mS2) that develop services, while journalists are the storytellers. This imagined division of labor relies on a traditional understanding of journalism.

In contrast, civic tech organizations in the African context position themselves as alternative data journalism organizations. The non-profits angle their organizations (at least in the ways they describe missions they publicize) to support journalism and promote data-driven projects through civic-oriented approaches in the continent. As a manager of one of the organizations explained:

One underlining points that occurs to all our projects is training and trying to build capacity in journalists to handle data themselves and bringing together our innovation fellows who in turn work with the journalist to either build capacity or develop charts or develop tools that they can use. So, one underlining thing for us is really building the digital capacity of journalist and news houses (OU1).

The non-profits mentioned they support several kinds of journalism: Investigative, service, watchdog, advocacy, and citizen journalism. The areas they sought to have most impact were in the sourcing of news, data visualization, fact-checking, training of journalists in new data skills, more citizen involvement in sourcing and processing of data, and promoting public and media accountability. One reason civic tech organizations in the African countries we studied are more directly involved in journalism is that data journalism is much less established in these contexts. Our respondents described the state of data journalism practices and activities as underdeveloped in comparison to that of Western Europe and North America. Instead, legacy news organizations run
temporary projects in partnership with international non-profit organizations. At least
in the ways they describe the objectives they publicize, the civic tech organizations
we studied seek to support journalism by promoting data-driven projects and civic-ori-
ented approaches to doing journalism (Cheruiyot and Ferrer-Conill 2018).

As a result of this drive towards supporting data journalism, civic technologists in
the African context identify more strongly with the idea that they are promoters of
data journalism that also do data journalism themselves in order to push for more
widespread adoption of these practices. They propose to enhance the truth-telling
mission of traditional journalism through training journalists in the use of data tools
and diversified ways of sourcing and presenting news. Compared to civic tech organi-
zations in Europe, they further involve themselves directly in news production proc-
esses. These processes involve digital storytelling, disseminating reports from their
data stories through their websites, blogs, and social media, and increasing avenues
for news sources through making data, from a variety of sources, available and access-
ible as well as promoting citizen participation in finding and sharing data.

While training news workers in legacy news organizations is common among the
civic technologists in both the European and African contexts, African civic tech organi-
zations also directly support the news production in legacy media organizations. For
example, Code for Africa directly collaborated with mainstream media organizations
through investigative projects like Dodgy Doctors (https://health.the-star.co.ke/) by
Kenya’s newspaper the Star. In this project, the two organizations jointly created a
database of qualified medical doctors from existing government records, and through
the Star’s mobile and web platforms, members of the public could search the database
to authenticate the registration of medical practitioners in public clinics.

Another factor that helps to explain the differences between the European and
African civic tech organizations we studied is the diversity of the media landscape in
the regions they operate. While civic tech organizations in Germany and the UK think
of themselves as merely complementing, but not replicating or directly affecting data
journalism, there are also new, entrepreneurial forms of journalism that blur the boun-
daries between data journalism and civic tech. Some of these entrepreneurial journal-
ism organizations hired former members of civic tech organizations and some of them
can be considered peripheral themselves in the sense that they operate at the inter-
section between journalism and civil society, e.g., the nonprofit newsroom Correctiv.
While peripheral to the core of professional journalism, these actors operate inside the
field of journalism and introduce practices of facilitating in journalism. Data journalists
working in start-ups, non-profits or other non-traditional media organizations see their
role as inventors who expand and diversify journalism, but they do not radically ques-
tion it either (Wagemans, Witschge, and Harbers 2018). In contrast, the media land-
scape of the African countries we studied is less diverse and data journalism is far less
common within legacy news organizations. Therefore, the peripheral actors more
strongly assert leading roles in promoting and helping to establish data journalism in
newsrooms through training, fellowships, and the development of flagship projects.

Interestingly, while entrepreneurial forms of journalism are trying to improve and
change journalism in various ways; the African civic tech organizations that think of
themselves as promoters of data journalism promote a form of journalism that is close
to traditional notions of investigative watchdog journalism. Code for Africa, Africa Check and Open up see their role of watching the watchdogs as critical. Their mission of reinforcing or reinventing the truth-telling mission of traditional journalism is a critique of legacy media’s performance, level of quality journalism, and conformity to journalistic values and norms. For example, most interviewees from these organizations criticize the limited involvement of citizens in traditional journalism hence their integration of citizen-oriented approaches and tools or even alternative ways of gathering news through non-journalists. Some of the European organizations we studied raised similar concerns about the work of journalists, but watching the watchdogs is not a central part of their organizational mission. In the European context, the direct involvement in journalism is mostly limited to individual members participating in data journalism fellowships or events like Hacks/Hackers (Lewis and Usher 2014). African civic tech organizations do not stop at participation. For example, they highlight the lack of transparency in truth production by legacy news media when journalists fail to share their data gathering techniques, to publicly avail datasets in their digital storytelling or to fact-check methodologies. In promoting transparency themselves, some of the civic technologists have adopted ethical and operational guidelines similar to legacy media organizations. For example, apart from creating publicly shared methods through which they fact-check news stories, Africa Check ascribes to the ethical guidelines set by The International Fact-Checking Network (IFCN). Also, debate on data ethics shapes some of the internal organizational guidelines for practitioners of civic tech with organizations such as Open Up focused on “ethical data scraping and data collection” (OU2).

In sum, the non-profits in Europe made a clearer distinction between their role and that of legacy media organizations, mostly seeing themselves as facilitators who complement traditional forms of journalism. In Africa, civic tech organizations perceived themselves both as facilitators and alternatives to legacy news media. The reason for this could be that legacy news organizations lack expertise and resources to start and sustain data-driven projects (Tietaah et al. 2018). We could observe therefore that largely, non-profits in Europe tend to be more distant from the core of news production (i.e., legacy news media) in comparison to their African counterparts.

**Negotiating Between Civic and Journalistic Values**

Across the contexts we studied, peripheral actors to data journalism promote a vision of public or citizen-oriented journalism through creating guidelines, training kits and tools to be used by aspiring citizen journalists. The approach can sometimes put them at odds with more traditional authoritative journalistic stances. In the European context, tension has been shown in relation to entrepreneurial journalism, whose actors “combine, complement, and interweave seemingly opposing practices and values, moving beyond the traditional/alternative [journalism] divide” (Wagemans, Witschge, and Harbers 2018, 12). Our data confirms that more citizen-oriented forms of journalism are primarily promoted by entrepreneurial journalists in the European context. The aforementioned nonprofit Correctiv, for example, made training ordinary citizens the methods and techniques of journalism a central part of its mission. One of its projects that best illustrate this approach is the “CrowdNewsroom”, a platform where the crowd (i.e.,
registered users) should not only help collecting or verifying data but is also actively involved in the production process of news. Some of our interviewees who work in entrepreneurial journalism organizations explicitly aim to introduce practices from civic tech to journalism. As one of our interviewees in Germany put it, data journalism for him is “applied civic tech” (Co1). As an interviewee stated: “we don’t publish stories, we publish the tools we developed to understand the data ourselves” (Ts1).

In the African context, we found that similarly, a pillar of civic tech organizations is promoting the participation of citizens in the collection and sharing of data sets from government sources and the promotion of open data. This leads civic tech organizations in Africa to be quite similar to the entrepreneurial forms of journalism we found in Europe, more so than European civic tech organizations who tend to draw a clear distinction between their own work and journalism (see above). One example is Open Up’s Pocket Reporter (http://pocketreporter.co.za/), a mobile phone application that similarly to the Crowdnewsroom provides citizens with the basics to do newsgathering. As a practitioner of an African civic tech organization put it:

Journalism is just one of the sectors in which we want to enrich the people in terms of understanding how they can use data to further their (societal) cause and their vision. Community organizations and government is another sector. We are trying to emphasize how data can help improve governments in our countries. We are like an open data organization and data is the way we hope to impact people, but we do that by either producing tools that they can use to make it easy for them to use data and to understand what data shows or to communicate that data (OU1).

This suggests that their civic aspirations go beyond journalistic boundaries, targeting other social institutions. For example, to support an advocacy initiative against mining companies’ exploitation in Ghana, Code for Africa created the data platform “Where My Money Dey” (http://wmmd.codeforafrica.org/) to track royalties paid by the foreign mining firms and to monitor if the monies were used for public projects such as the construction of schools and hospitals.

Similar to entrepreneurial journalists in the European contexts we studied, for some of our African interviewees, advocacy and activist approaches took center-stage in their data practices, and in some cases, this appeared to cause tensions with journalistic goals, as they tried to combine practices of facilitating with gatekeeping in various ways. For example, a respondent from Africa Check described activism as complementary to the truth-telling mission of journalism:

No, I don’t use (the term) activism. And this is also maybe me talking personally rather than organizationally, but I don’t believe that professional journalists should be activists for anything except media. So, it’s acceptable for a journalist to be an activist for free speech, all of those sorts of things. (AC4)

Such combinations of seemingly conflicting approaches between activist/advocacy and journalistic roles show how our interviewees in Europe and Africa constantly negotiate their various dispositions in the practices of civic tech and data journalism. However, depending on the media landscape in which they operate, these negotiations take place in different areas of the field: directly within civic tech organizations in Africa, and within entrepreneurial forms of journalism in Europe. In both contexts, however, we could observe that civil society goals of equality, transparency or
independence end up being co-opted into journalistic practice through activist/advocacy approaches with implications to both civic and journalistic values.

**Conclusion**

This study aimed to interrogate how actors at the periphery of the journalistic field in European and African contexts understand their roles and activities in regards to data journalism and how the non-profits propose to shape the practice of data journalism in the two contexts. We adopted a contextual comparative approach between European and African organizations and focused on how the practices of these peripheral actors promote, complement or seek to redefine the practice of data journalism. From our findings, we draw three main conclusions: (a) through shared cross-national practices, peripheral actors expand and continuously influence the practice of data journalism across contexts; (b) civic technologists recognize the need of gatekeeping to complement their vision of participatory culture and therefore more directly engage in those practices where data journalism is lacking; and (c) while journalistic cultures define data journalism practices in specific contexts, the influence of peripheral actors and the resulting friction between journalistic and civic goals affects how data journalism practices manifest themselves in diverse contexts.

First, our findings show that European and African civic tech organizations have many things in common as they form a transnational advocacy network bound by a “global project” that fits into what (Reese 2015) refers to as “global norms and conversation” (2263). This global project is developed and maintained through overlapping actor-constellations in civic tech organizations in European and African countries and a high degree of communicative connectivity (Hepp 2015) across all the organizations we studied. However, global projects of transnational advocacy networks need to be translated into local contexts (cf. Reese 2015). The global project of civic tech is to enable forms of participation in as many different contexts as possible by developing eco-systems of data infrastructures and tools; intended to help citizens to be more informed, active and engaged (Baack 2018a). The differences between civic tech organizations play out mostly in the way local contexts shape the activities and goals of civic tech projects.

Second, the ways in which civic tech organizations in European and African countries understand their role in relation to data journalism are similar. In both contexts, civic technologists consider journalism an essential part of their overall mission of promoting civic participation. Journalists should complement their work as empowering intermediaries that make data accessible to the wider public (Baack 2015), act as gatekeepers that highlight important issues and help civic tech applications to gain more attention, and help to illustrate the benefits of open data and freedom of information (Cheruiyot and Ferrer-Conill 2018; Baack 2018b). In other words, civic tech organizations recognize that they require media organizations that fulfill these functions to realize their visions. If they think that journalism “fails” to deliver on the task they assign to it, civic technologists try to compensate for this “failure” by engaging more directly with media organizations. As a result, the practices and role perceptions of civic technologists and data journalists overlap more in contexts where data journalism is less established because...
peripheral actors are adopting the practices of data journalists more directly and put a greater emphasis on advocating for data journalism. These differences in the practices and roles of our European and African respondents can only be accounted for through the notion of contextualism. Even though data journalism practice originated in the West and Western foundations fund many of the African organizations we studied, our findings illustrate that the “global project” of civic tech is not a simple diffusion of Western ideas to the globe. Both our European and African respondents negotiate their local and national origins with global issues. This falls in line with Hepp’s (2015) call to understand global phenomena like non-profit civic tech as reciprocal, multilayered, and stratified.

Third, and more importantly in reassessing the maturing practice of data journalism, our findings indicate that the data-driven practices of our respondents are defined by frictions between their goals as civil society activists and traditional journalistic notions of gatekeeping. We showed that relatively traditional notions of journalism that emphasize gatekeeping are important to the mission of civic tech organizations, and suggest that part of civic technologists’ goals is to sustain the practice of data journalism beyond legacy news organizations. At the same time, their entanglements with news media, through advocacy and training, has a potential to introduce rather non-traditional practices of facilitating to journalism, expanding the mainstream journalistic practices.

As we have noted, data journalism is shaped by the diversity and different conceptualizations of it as well as the entanglements with peripheral actors in different geographical contexts. On the basis of our analysis, we suggest that understanding data journalism as a maturing field means paying greater attention to its growth and spread beyond Western contexts – not only by studying data journalism in non-Western countries (as in the case of China, e.g., Zhang and Feng 2018), but by doing justice to the transcultural nature of data journalism (Hepp 2015). This means exploring the tensions between global similarities and diverse contextual manifestations. Future studies could rely more on theories of transcultural communication and develop methodological frameworks that take this tension into account.

**Disclosure statement**

No potential conflict of interest was reported by the authors.

**ORCID**

David Cheruiyot [http://orcid.org/0000-0002-4774-4643](http://orcid.org/0000-0002-4774-4643)
Stefan Baack [https://orcid.org/0000-0002-2464-7699](https://orcid.org/0000-0002-2464-7699)
Raul Ferrer-Conill [http://orcid.org/0000-0002-0501-2217](http://orcid.org/0000-0002-0501-2217)

**References**

Hepp, Andreas. 2015. *Transcultural Communication*. Chichester: John Wiley & Sons Ltd.


